

## Problem M. Team Competition

Input file: *standard input*  
Output file: *standard output*  
Time limit: 2 seconds  
Memory limit: 512 mebibytes

$N$  persons want to practice for an upcoming team competition. Snuke wants to schedule the practice. The schedule should satisfy the following conditions:

- The number of days of the practice is between 1 and  $N^2$ , inclusive.
- Each day, exactly three of  $N$  persons will participate in the practice.
- Let  $f(p, q)$  be the number of days when both persons  $p$  and  $q$  will practice. The value  $f(p, q)$  must be the same for all pairs of two distinct persons  $(p, q)$ .

### Input

Input consists of one integer  $N$  ( $3 \leq N \leq 1000$ ).

### Output

If no schedule that satisfies the conditions exists, print  $-1$  in a single line.

Otherwise, print a schedule that satisfies the conditions in the following format. First line must contain the number of days  $K$ ;  $i$ -th of the next  $K$  lines must contain the indices  $x_i, y_i, z_i$  of the three persons who practice on day  $i$ . The persons are numbered 1 through  $N$ . If there are several such schedules, print any one of them.

### Example

standard input	standard output
5	10 1 2 3 1 2 4 1 2 5 1 3 4 1 3 5 1 4 5 2 3 4 2 3 5 2 4 5 3 4 5